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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/710,656

07/27/2004

Steven W. Lundberg

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EXAMINER

WASSUM, LUKE S

ART UNIT

PAPER NUMBER

2167

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/710,656	<b>Applicant(s)</b> LUNDBERG ET AL.	
	<b>Examiner</b> Luke S. Wassum	<b>Art Unit</b> 2167	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>20051026</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***The Invention***

1. The claimed invention is a data structure for storing patent claim information and a method for populating said data structure.

### ***Response to Amendment***

2. The Applicants' amendment, filed 13 November 2006, has been received, entered into the record, and considered.
3. As a result of the amendment, claim 8 has been amended, and claims 15-22 have been canceled. Claims 1-14 are now presented for examination.

### ***Election/Restrictions***

4. Applicant's election without traverse of the claims of Group I, claims 1-7, in the reply filed on 13 November 2006 is acknowledged.
5. In response to the Applicants' arguments that the amendment to independent claim 8 places the claims of Group II (claims 8-14) into the same class as the claims of Group I, the examiner respectfully disagrees.

Nevertheless, in light of the fact that examining the claims of Group II in addition to the claims of Group I would no longer (in light of the amendment to claim 8) place an undue burden on the examiner, all of the pending claims have been examined.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Information Disclosure Statement***

7. The Applicants' Information Disclosure Statement, filed 26 October 2005, has been received and entered into the record. Since the Information Disclosure Statement complies with the provisions of MPEP § 609, the references cited therein have been considered by the examiner. See attached form PTO-1449.

*Drawings*

8. The application includes informal (handdrawn) drawings. While these drawings are acceptable for examination purposes, the examiner encourages the Applicant to submit formal drawings at the earliest opportunity. Early submission of formal drawings will help expedite post-allowance processing and publication of the issued patent.

*Claim Rejections - 35 USC § 101*

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

11. Regarding claim 1, this claim is worded as a data structure.

The examiner initially points out that claim 1, while reciting a 'data structure', fails to disclose the use of said 'data structure' in combination with a computer component to impart any intended functionality. As such, in the context of the claim

language, the claim merely constitutes non-functional descriptive material per se, which is non-statutory.

The examiner additionally points out that the definition of a data structure is "a physical or logical relationship among data elements, designed to support specific data manipulation functions". Claim 1 fails to include any recitation of any specific data manipulation function which the claimed 'data structure' is designed to support, which renders the claimed 'data structure' a mere arrangement of data. For this additional reason the claim is deemed non-statutory.

Furthermore, data structures not claimed as embodied in computer-readable media are descriptive material per se, and are not statutory because they are not capable of causing functional change in a computer. See, e.g., *In re Warmerdam* (CAFC) 31 USPQ2d 1754 at 1760 (claim to a data structure per se held non-statutory).

12. Claims 2-7, fully incorporating the deficiencies of independent claim 1, are likewise rejected.

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1 and 5-11 are rejected under 35 U.S.C. 102(b) as being anticipated by **Sheremetyeva** ("Natural Language Analysis of Patent Claims").

15. Regarding claim 1, **Sheremetyeva** teaches a data structure as claimed, comprising a first field containing data representing a first portion of a patent claim, a second field containing data representing a second portion of a patent claim, and a third field containing data representing a third portion of a patent claim, wherein the third field associated the first field to the second field (see illustration of the data structure containing all portions of a patent claim, Figures 2 and 3, pages 69 and 70 et seq.).

16. Regarding claim 8, **Sheremetyeva** teaches a method as claimed, comprising designating a first definitional element of a patent claim, designating a second definitional element of the patent claim, and designating a relational element of the patent claim, wherein the relational element relates the second definitional element to the first definitional element, and storing the first definitional element, second definitional element and the relational element in a data structure (see disclosure that the analyzer takes a claim text as input and produces a set of internal knowledge structures, section 3 Analysis Algorithm, beginning on page 69; see also illustration of the data structure containing all portions of a patent claim, Figures 2 and 3, pages 69 and 70 et seq.).

17. Regarding claim 5, **Sheremetyeva** additionally teaches a data structure wherein the first, second and third fields contain text of the patent claim (see illustration of the data structure containing all portions of a patent claim, Figures 2 and 3, pages 69 and 70 et seq.).

18. Regarding claims 6, 7 and 11, **Sheremetyeva** additionally teaches a data structure and method wherein the second field contains data representative of a class defined in



another data structure that is a lookup table (see disclosure that the system performs supertagging of the lexemes, wherein the supertags contain morphological information and semantic information, an ontological concept, defining word membership in a semantic class such as an object, process, substance, etc., section 2.1 Shallow Lexicon, second and third paragraphs et seq.).

19. Regarding claims 9 and 10, **Sheremetyeva** additionally teaches a method wherein designating the first and second definitional elements of the patent claim includes designating at least a portion of the patent claim as the first and second definitional elements respectively (see illustration of the data structure containing all portions of a patent claim, Figures 2 and 3, pages 69 and 70 et seq.).

### *Claim Rejections - 35 USC § 103*

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

22. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

23. Claims 2-4 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Sheremetyeva* ("Natural Language Analysis of Patent Claims") as applied to claims 1 and 5-11 above, and further in view of *Kerven et al.* (U.S. Patent Application Publication 2002/0042784).

24. Regarding claims 2-4 and 12-14, **Sheremetyeva** teaches a data structure and method substantially as claimed.

**Sheremetyeva** does not explicitly teach a data structure and method including the storage of information associating claim information with a portion of the patent disclosure providing support to the corresponding claim text.

**Kerven et al.**, however, teaches and/or suggests a data structure and method including the storage of information associating claim information with a portion of the patent disclosure providing support to the corresponding claim text (see disclosure of a system for searching and analyzing intellectual property related materials, including the storage and analysis of text of patents and their claims (see paragraphs [0052] and [0053] et seq., and also including the storage of reference information associating a given portion of a claim with portions of the patent specification providing support for said claim portion, paragraphs [0055] and [0069]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to store information associating claim portions with portions of the patent

specification providing support for said claim portions, since this would provide additional resources which would facilitate the analysis of the claims by a user.

### ***Conclusion***

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Rivette et al.** (U.S. Patent 5,754,840) teaches a system for developing and maintaining documents including analyzing a patent application with regards to the specification and claims.

**Rivette et al.** (U.S. Patent 6,014,663) teaches a system for comparing text portions of patents by reference to index information.

**Rivette et al.** (U.S. Patent 6,339,767) teaches a system using hyperbolic trees to visualize data generated by patent-centric and group-oriented processing.

**Lee** (U.S. Patent 6,662,178) teaches a system for searching and organizing intellectual property information utilizing an IP thesaurus.

**Lee** (U.S. Patent 6,694,331) teaches a system for searching and organizing intellectual property information utilizing a classification system.

**Dehlinger et al.** (U.S. Patent 7,024,408) teaches a text classification code, system and method.

**Adler et al.** (U.S. Patent Application Publication 2003/0033295) teaches a method for analyzing and recording innovations.

**Colson et al.** (U.S. Patent Application Publication 2004/0103112) teaches a computer based method and apparatus for mining and displaying patent data.

**Lundberg et al.** (U.S. Patent Application Publication 2006/0036451) teaches a system for patent mapping, storage and searching.

**Williams** (U.S. Patent Application Publication 2006/0036452) teaches a system and method for patent portfolio evaluation.

**Williams** (U.S. Patent Application Publication 2006/0036453) teaches a system and method for patent portfolio evaluation.

**Williams** (U.S. Patent Application Publication 2006/0036529) teaches a system and method for patent portfolio evaluation and visualization.

**Williams** (U.S. Patent Application Publication 2006/0036632) teaches a system and method for patent portfolio evaluation using artificial intelligence.

**Williams** (U.S. Patent Application Publication 2006/0036635) teaches a system and method for patent portfolio evaluation.

**Fairweather** (U.S. Patent Application Publication 2006/0235811) teaches a system and method for mining data.

**East** ("Patent Claims - How to Keep Track of Them") teaches a method of analyzing patent claims through the use of a simple patent dependency table.

**Sheremetyeva et al.** ("Generating Patent Claims from Interactive Input") teaches a system which generates claim texts from the input specified partly by a stored conceptual text schemata and partly by the input from a user.

**Sheremetyeva et al.** ("Knowledge Elicitation for Authoring Patent Claims") teaches a system that lets one readily acquire knowledge about different domains and through the use of text generation can simplify composition tasks faced by patent professionals.

**Larkey** ("A Patent Search and Classification System") teaches a system for searching and classifying U.S. patent documents.

**Sheremetyeva et al.** ("On Creating Metadata with Authoring Tools") teaches issues of knowledge markup with authoring tools in which the users construct representations of their knowledge.

**Mase et al.** ("Proposal of Two-Stage Patent Retrieval Method Considering the Claim Structure") teaches a patent retrieval method that considers a claim structure for a more accurate search for invalidity

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke S. Wassum whose telephone number is 571-272-4119. The examiner can normally be reached on Monday-Friday 8:30-5:30, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

In addition, INFORMAL or DRAFT communications may be faxed directly to the examiner at 571-273-4119. Such communications must be clearly marked as INFORMAL, DRAFT or UNOFFICIAL.

Customer Service for Tech Center 2100 can be reached during regular business hours at (571) 272-2100, or fax (571) 273-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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11 January 2007